

Teacher Effectiveness of Senior Secondary School Teachers in relation to their Attitude towards Information Technology

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ABSTRACT

The present paper attempts to study the teacher effectiveness of senior secondary school teachers in relation to gender and type of school. Then the attempt has been made to assess the degree of attitude of senior secondary school teachers towards Information Technology (IT) and to find out the relationship between teacher effectiveness and attitude towards information technology of senior secondary school teachers. The sample for the study consisted of 400 senior secondary school teachers of Ganderbal and Srinagar district of Kashmir. The findings of the study revealed that most of the senior secondary school teachers have favorable or positive attitude towards Information Technology. Gender has no significant influence on teacher effectiveness of senior secondary school teachers. Type of school has a significant effect on teacher effectiveness of senior secondary school teachers. Government senior secondary school teachers are reported to be more effective than their private counter parts. There is a significant and positive correlation between teacher effectiveness and attitude towards IT of senior secondary school teachers.

Key words: Teacher Effectiveness, Attitude towards Information Technology (IT), Senior Secondary School Teachers

1. INTRODUCTION

Darling Hammond (2010)¹ defined an effective teacher as one who is intellectually challenging , motivating students, setting high standards and encourages self initiating learning. Anderson (2004)² viewed an effective teacher as those teachers who achieved the goal set for them or goal set for them by others like the Ministry of Education. Effective teachers are very important for students learning.

Grant (2011) identified four dimensions that were used to characterize an effective teacher as follows:

- . Instructional effectiveness
- . Uses of assessment for student learning

. Positive learning and

. Personal quality of the teacher.

The use of IT in teaching learning process is relatively new phenomenon and it has been the educational researchers' focus. The effective integration of this technology into classroom practices poses a challenge to teachers and administrators. Several studies argue that the use of new technologies in the classroom is essential for providing opportunities for students to learn to operate in an information age. It is evident, as Yelland (2001)³ argued that traditional educational environment does not seem to be suitable for preparing learners to function or be productive in the workplaces of today's society. She claimed that organizations that do not incorporate the use of new technologies in institutions cannot seriously claim to prepare their students for life in the twenty first century. This argument is supported by Grimus (2000)⁴ who pointed out that "by teaching ICT skills in higher educational institutions, the students are prepared to face future developments based on proper understanding. The use of ICT in education can help improving motivation and generally deepens understanding (Dede, 1998)⁵.

IT integration in education generally means technology based teaching and learning process that closely relates to the utilization of learning technologies in schools that will make students familiar with technology and they will learn better within technology-based environment. Issue of IT integration in schools, specifically in the classroom is vital. This is because, the use of technology in education contributes a lot in the pedagogical aspects in which the application of technologies will lead to effective learning with the help and supports from ICT elements and components (Jamieson-Procter et al; 2013). IT provides the help and complementary support for both teachers and students where it involves effective learning with the help of the computers to serve the purpose of learning aids (George et al; 2003).⁶

II.NEED AND IMPORTANCE OF THE STUDY

Today teachers are facing many challenges and are trying to keep pace with the continued progress in information resources. Changes are inevitable and therefore, a teacher is effective if he can use effective strategies to promote student's motivation to learn and integrate technology into the curriculum. Information technology (IT) if used properly has the ability to enhance relationships between teachers and students. When teachers effectively integrate technology into subject areas, teachers grow into roles of adviser, content expert and coach. But only the technological up gradation of educational institutions will not change the performance of our students unless the teachers have the positive attitude towards its adaption, use and application in the teaching learning process. Highly effective teachers have right attitude towards technology and provide opportunities for students to learn to operate in an information age. A part of the significance of this study is that findings of this research are assumed to throw light on how attitude of teachers towards information technology is related to teacher effectiveness. The results of the study will motivate the teachers to develop positive attitude towards information technology in order to improve their performance and could help the schools to prepare and provide direction for professional development of teachers in order to increase their ability to use information technologies for learning assessments and for fostering student interaction and collaboration.

III.OBJECTIVES OF THE STUDY

The present study is aimed at achieving the following objectives

1. To assess the degree of attitude towards information technology of senior secondary school teachers.
2. To study the teacher effectiveness of senior secondary school teachers with respect to gender.
3. To study the teacher effectiveness of senior secondary school teachers with respect to type of school (government/private).
4. To investigate the relationship between teacher effectiveness and attitude towards information technology of senior secondary school teachers.

Hypotheses of the Study

H₀ 1: There will be no significant difference in the teacher effectiveness of male and female senior secondary school teachers.

H₀ 2: There will be no significant difference in the teacher effectiveness of government and private senior secondary school teachers.

H₀ 3: There will be no significant relationship between teacher effectiveness and attitude towards information technology of senior secondary school teachers.

IV.RESEARCH METHODOLOGY

Sample

A Simple random sampling technique was employed by the researcher with a purpose to select a sample of 400 teachers at higher secondary school level from district Ganderbal and district Srinagar of the Jammu and Kashmir state, of India.

Tools Used

As far the tools are concerned, only standardized tests were employed for obtaining valid and reliable data for dependable results. The tools used for data collection in present investigation are listed below:

- 1.) Teacher Effectiveness Scale (TES-KU) developed by Dr. Umme Kulsum (2017, revised).
- 2.) Attitude Scale towards Information Technology for Teachers (ASTITT-NI) developed by Dr. Nasrin and Dr. Fatima Islahi (2017 revised).

V.RESULTS OF THE STUDY

Objective No 1: To assess the degree of attitude towards information technology of senior secondary school teachers.

In order to find out the degree of attitude of senior secondary school teachers towards information technology, their scores on the attitude towards information technology scale were divided into three groups using the norms from the manual of scale. The groups are comprising of higher secondary school teachers having i) Favourable attitude towards IT ii) Moderate attitude towards IT iii) Unfavourable attitude towards IT. Distribution of teachers in each of three groups is shown in Table 1 and the mean of total scores on the attitude towards IT scale is reported in Table 2

Table 1: Percentage distribution of senior secondary school Teachers in different groups on the variable Attitude towards Information technology (IT)

Degrees of attitude towards IT	Score limits	Number of Teachers	Percentage
Favourable	109 and above	193	48.25%
Moderate	85-108	84	21%
Unfavourable	84 and less	123	30.75%

Table 2 Mean and S.D of total scores on Attitude towards IT scale

N	Variable	M	S.D
400	Attitude towards IT	109.31	65.246

Table 1 showed that maximum percentage(48.25%) of higher secondary school teachers are having favourable attitude towards information technology and 30.75% teachers are having unfavourable attitude towards Information technology and percentage of teachers having moderate attitude towards Information technology is only 21%.

Further mean (Table 2) of total scores on attitude towards IT scale i.e. falls in the score limit of favourable degree of attitude towards information technology, again revealing that most of the teachers in senior secondary schools have favourable attitude towards information technology. The percentage distribution of teachers as per their levels of attitude towards information technology is depicted in Fig 1

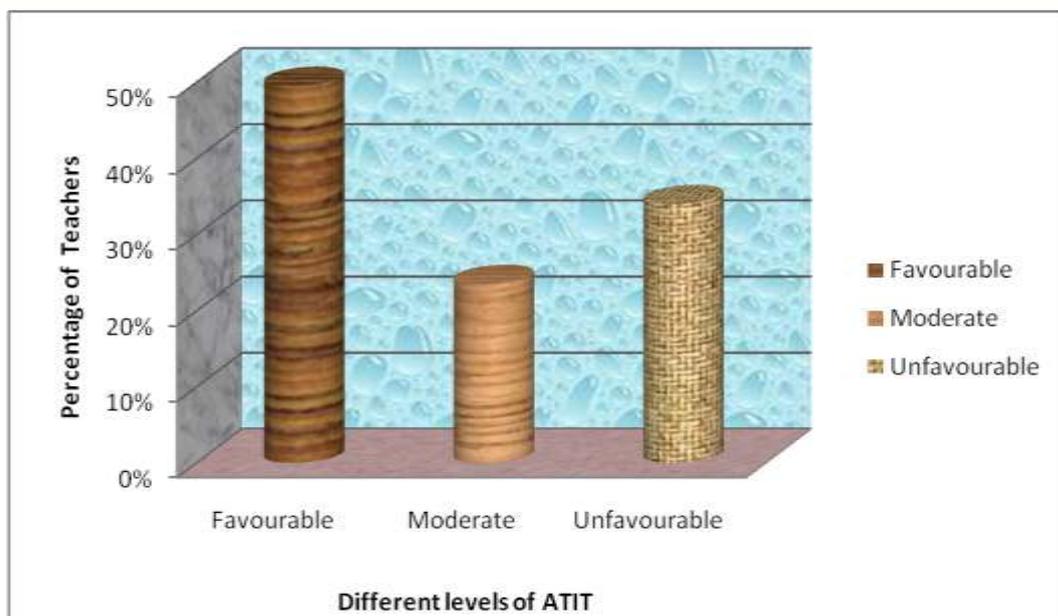


Figure 1: Percentage wise distribution of teachers as per their degree of attitude towards Information technology

Objective No. 2: To study the teacher effectiveness of Senior secondary school teachers with respect to gender.

Hypothesis 1: There will be no significant difference in the teacher effectiveness of male and female senior secondary school teachers.

To compare the teachers effectiveness of senior secondary schools teachers with respect to gender, independent sample t-test was conducted whose results are presented in the table 3

Table 3: Comparison of teacher effectiveness scores of male and female senior secondary school Teachers

Gender	N	Mean	Std. Deviation	df	t
Male	220	370.88	86.113	398	-.420
Female	180	374.49	84.504		

Table 3 shows that there is no significant ($p > .01$) difference in the teacher effectiveness of male and female senior secondary school teachers on account of insignificant t-value ($P > 0.01$) revealing that gender has no effect on the teacher effectiveness of the senior secondary school teachers. However, mean teacher effectiveness score of females (374.49) is slightly higher than the male teachers (370.88). The results are represented graphically in Figure 2. Thus, the null hypothesis H_0 1 stating that “there will be no significant difference in the teacher effectiveness of male and female senior secondary school teachers” is accepted.

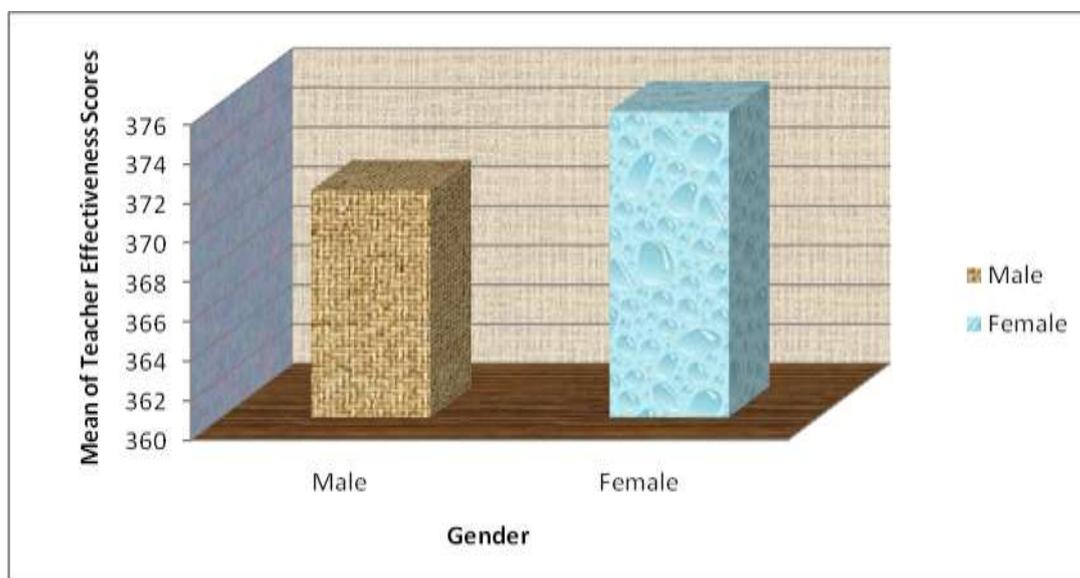


Figure 2: Comparison of mean teacher effectiveness scores of male and female senior secondary school teachers.

Objective No. 3:- To study the teacher effectiveness of senior secondary school teacher with respect to type of school (government/private).

Hypothesis 2: *There will be no significant difference in the teacher effectiveness of government and private senior secondary school teachers.*

An independent sample t-test was conducted to compare the teacher effectiveness of government and private senior secondary school teachers. The results are presented in the Table 4.

Table 4: Comparison of Teacher Effectiveness scores of government and private senior secondary school teachers

Type of school	N	Mean	Std.Deviation	Std. Error mean	df	t
Government	200	397.40	95.892	6.781	398	6.095*
Private	200	347.61	64.416	4.555		

*Significant at 0.01 level, $p < 0.01$

Table 4 revealed that there is a significant ($p < 0.01$) difference in the teacher effectiveness of government senior secondary school teachers and private senior secondary school teachers. Thus, null hypothesis $H_0 2$, stating that

“there will be no significant difference in the teacher effectiveness of government and private senior secondary school teachers” is rejected. Comparison of mean scores (Fig 3) indicated that government senior secondary school teachers are more effective than private senior secondary school teachers.

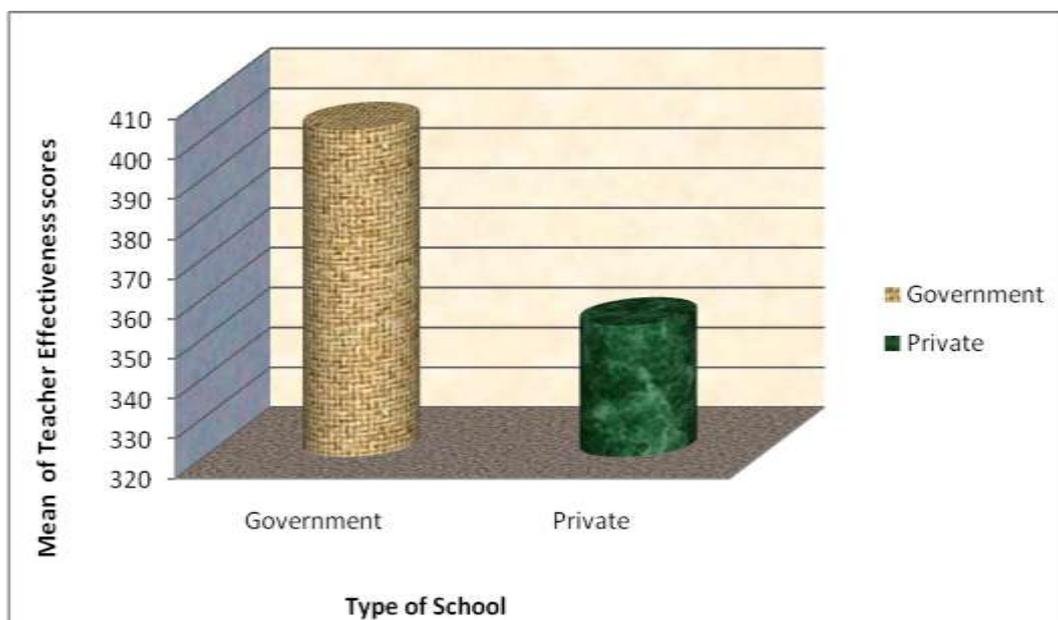


Figure3: Comparison of mean scores Teacher Effectiveness of government and private senior secondary school teachers.

Objective No. 4: To study the relationship between the teacher effectiveness and attitude towards information technology of senior secondary school teachers.

Hypothesis 3: There will be no significant relationship between teacher effectiveness and attitude towards information technology of senior secondary school teachers.

To explain the relationship between the teacher effectiveness and independent variable, teacher’s attitude towards information technology, Pearson product moment correlation and Regression analysis was employed that yielded the results as presented in the Table 5.

Table5: Relationship of teacher effectiveness of senior secondary school teachers to their attitude towards Information technology (IT)

Independent variable(s)	Unstandardized coefficients		Standardized coefficients	t	Pearson r
	B	Std. error	β		
Constant	354.121	8.213		43.115	.130*
ATIT	.170	.065	.130	2.612*	

* Significant at 0.01 level

$R^2 = .017$; $F_{(1,399)} = 6.823$; $p < 0.01$

Pearson product moment correlation revealed that teacher effectiveness and attitude towards information technology were significantly correlated, ($r = .130$; $p < 0.01$). Though results showed positive relationship but is of low magnitude. Thus, it can be inferred that teacher effectiveness is weakly correlated with the attitude towards Information technology (IT).

Results from Regression analysis showed that attitude towards IT significantly affected the dependent variable teacher effectiveness ($F_{(1,399)} = 6.823$; $p < 0.01$) and explained 1.7% of variance in teacher effectiveness. The positive β coefficient bearing significant t value indicated that attitude towards information technology had a positive influence on teacher effectiveness of senior secondary school teachers of Kashmir. Therefore, null hypothesis $H_0 4$ stating that “there will be no significant relationship between teacher effectiveness and attitude towards IT of senior secondary school teachers” is rejected.

Analysis of data rejected the null hypothesis that there will be no significant relationship between teacher effectiveness and attitude towards Information technology of senior secondary school teachers. Findings revealed that teachers with a more positive or favourable attitude towards IT have a higher level of teacher effectiveness as compared to those having negative attitude. This provides credence to the fact that teachers attitude towards technology is vital for student success in the learning environment as teachers who have positive attitude towards IT can make teaching and learning process more effective (Yahaya & Yee, 2010)⁷. Attitudes in general have been accepted to impact skills and achievement (Lin et al, 2001, Wilson et al., 2000)⁸. Several studies have demonstrated that teachers positive attitude towards computers is considered to be a key factor in fostering computer integration and the enhancement of quality learning and teaching using computers (Yuven et al., 1999)⁹. When the teacher is very positive about the value of technology or software, students' learning scores improve (Office of learning Technologies, 2000).

For productive teaching-learning process teachers and students have to use information technologies according to their requirements and availability (Hussain & Safder, 2008)¹⁰. Teachers with a more positive attitude have a higher teacher effectiveness as with positive attitude they may possibly play changed roles and modify their educational approach, since the teachers with positive attitude towards the use of computers in education behave differently from colleagues with a less positive attitude. Teachers' positive attitude towards computers is recognized as a necessary condition for effective use of computers in the classroom (Huang & Liaw, 2005)¹¹.

Technology offers a great deal of services that are of huge benefit to the teacher. For example, using a computer to do a student database is faster, and it saves the teacher time to devote to other things in his/ her work. There is greater possibility of accessing up-to-date content as updating information on the web can be done faster and more easily than with textbooks. The teacher can adapt the IT based tools to their particular approach, incorporate a number of supporting pedagogical features into instruction, and cater for individual differences. Thus, the successful use and application of computers in the educational system may very much be

related to and dependent upon the teachers' attitude towards IT. Effective teaching and approaches to teaching and learning cannot be separated from attitudes. So the teachers of the digital age need to take an approach that is relatively open, to seek to inspire, support and facilitate learning, to create an environment conducive to learning. There need to be balance between using technology and traditional methods of teaching and learning to bring effectiveness in teaching.

VI.FINDINGS OF THE STUDY

- 1) Most of the senior secondary school teachers have favourable or positive attitude towards IT .Out of the total sample; 48.25% teachers have favourable attitude towards IT, 21 % of teachers have moderate degree of attitude towards IT and 30.75% have unfavourable attitude towards IT.
- 2) Gender has no significant influence on teacher effectiveness of senior secondary school teachers.
- 3) Type of school has a significant ($p < 0.01$) effect on teacher effectiveness of senior secondary school teachers. Government senior secondary school teachers are reported to be more effective than their private counter parts.
- 4) Positive and significant ($r = .130$; $p < 0.01$) relationship existed between teacher effectiveness of senior secondary school teachers and their attitude towards information technology. Though the relationship is significant but it is weak and attitude towards IT explained approximately only 1.7% of variance in the teacher effectiveness of senior secondary school teachers.

VII.CONCLUSION

On the basis of results it is concluded that teacher effectiveness is independent from the effects of gender; both male and female teachers have same level of teaching performance. However, the performance of teachers teaching in government senior secondary schools is better than the teachers teaching in private senior secondary schools .This finding is interesting as it highlights the change in the performance of government higher secondary school teachers. Correlation results made it clear that teacher effectiveness is positively correlated with attitude towards IT and it can be concluded that effective teachers have positive attitude towards information technology. In other words, we can say that teachers having favourable attitude towards IT can teach better as compare to those having unfavourable attitude towards IT.

VIII.EDUCATIONAL IMPLICATION

Attitude towards information technology was found to be significantly associated with teacher effectiveness. Therefore, there is need to increase the usage of technology in the classrooms of schools so that the teachers having negative attitude towards IT get motivated and change their mindset towards the use of technology in the classroom.

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